AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier.

1. (Previously Presented) An arrangement for displaying images of a scene or object,

comprising an image display device comprising a multitude of light-transmitting image rendering elements, which are arranged in a raster of rows and/or columns and on which bits of image information from several perspective views of the scene or object can be displayed,

and comprising a plane wavelength filter array, which is arranged behind the image display device, and comprising a multitude of filter elements arranged in rows and/or columns, part of which are transparent to light of specified wavelength ranges, whereas a remaining part are opaque,

and comprising a controllable illuminator providing at least two modes of operation, in which

in a first mode of operation, light from a first light source arranged behind the wavelength filter array reaches the observer by passing through at least part of the light-transmitting filter elements and subsequently through a correlated part of the image rendering elements of the image display device, so that the scene or object is seen by the observer in three dimensions, and in which

in a second mode of operation, light from a second light source having at least one emission plane that is arranged between wavelength filter array and image display device and

that is essentially parallel to the wavelength filter array, leaves the said at least one emission plane and reaches the observer by passing through the image rendering elements of the image display device but not through the filter elements of the wavelength filter array, so that the scene or object is seen by the observer at least partially in two dimensions, and

further comprising a diffuse illuminator in the second mode of operation.

2. (Previously Presented) An arrangement as claimed in Claim 1, in which

the second light source is a planar light source configured as light guide, and in which

the light guide has two mutually opposite large surfaces and peripheral narrow surfaces, and the large surface facing the image display device or away from it corresponds to the emission plane, or both large surfaces correspond to the emission planes, and in which

the light guide receives light from one or several laterally arranged light sources, and in which

the light is coupled into the light guide via one or several of the narrow surfaces, partially reflected back and forth by total reflection off the large surfaces, and partially coupled out at the large surface corresponding to the emission plane or the large surfaces corresponding to the emission planes.

3. (Previously Presented) An arrangement as claimed in Claim 1, in which, in the second mode of operation, the first light source is switched on in addition to the second light source, only the large surface facing away from the image display device is an emission plane, and, to provide uniform illumination, only those areas of the emission plane are intended for

light emission that, in case of projection onto the wavelength filter array along a direction normal to the plane, are essentially congruent with the areas occupied by opaque filter elements.

4. (Previously Presented) An arrangement as claimed in Claim 3, in which the wavelength filter array is located at the large surface corresponding to the emission plane.

5. (Previously Presented) An arrangement as claimed in Claim 3, in which the large surface corresponding to the emission plane is, in the areas intended for emission, coated with a structure that interferes with total reflection, the structure comprising a coat of particles.

6. (Original) An arrangement as claimed in Claim 5, in which the interfering capability of the particles across the emission plane is inhomogeneous, ranging between two limit values that vary with the density of particles in the coating.

7. (Original) An arrangement as claimed in Claim 6, in which the interfering capability of the particles in each single coated area is essentially constant.

8. (Previously Presented) An arrangement as claimed in Claim 6, in which two parallel, opposite narrow surfaces are intended for inward light coupling, and in which the interfering capability of the coated areas, arranged in stripe-shaped segments aligned in parallel with the narrow surfaces, progressively increases with increasing distances x_1, x_2 up to a common maximum.

9. (Original) An arrangement as claimed in Claim 5, in which the interfering capability of the particles is essentially homogeneous, both within each of the partial areas and across the emission plane as a whole.

10. (Previously Presented) An arrangement as claimed in Claim 9, in which two mutually opposite, vertical narrow surfaces are intended for inward light coupling, and in which, in selected, non-overlapping areas of the wavelength filter array comprising one or several rows and /or_columns each and, together, completely covering the wavelength filter array, the ratio between the surface areas covered by filter elements that transmit light of specified wavelength ranges and the surface areas covered by opaque filter elements is defined depending on the maximally achievable luminance in those partial areas of the emission plane of the planar light source that, in case of projection along a direction normal to the plane, each correspond to one of the selected areas thus selected of the wavelength filter array.

11. (Previously Presented) An arrangement as claimed in Claim 5, in which an essentially light-absorbing layer is provided on top of the coat that interferes with total reflection.

12. (Previously Presented) An arrangement as claimed in Claim 1, in which the controllable illuminator comprises a device to control the first light source so as to create a luminance gradient over the plane of the wavelength filter array.

13. (Previously Presented) An arrangement as claimed in Claim 1, in which the controllable illuminator comprises a first light source that is a discharge lamp provided with a plane sealing glass on the side facing and parallel to the wavelength filter array, and with a phosphor coating provided on the inside of the sealing glass.

14. (Previously Presented) An arrangement as claimed in Claim 13, in which the phosphor coating is only applied on areas that, in case of projection onto the wavelength filter array along a direction normal to the plane, are essentially congruent with the areas covered by filter elements that transmit light of specified wavelength ranges.

15. (Previously Presented) An arrangement as claimed in Claim 13, in which the wavelength filter array is located on the outside of the sealing glass.

16. (Previously Presented) An arrangement as claimed in Claim 1, in which, in the second mode of operation, part of the light of the first light source is coupled out and then re-coupled into the second light source by optical elements, the coupled out part of the light being defined by the ratio between the wavelength filter array's surface areas covered by filter elements that transmit light of specified wavelength ranges and the surface areas covered by opaque filter elements.

17. (Previously Presented) An arrangement as claimed in Claim 16, further comprising light guides, reflecting elements or both of the foregoing for outcoupling and inward coupling.

18. (Previously Presented) An arrangement as claimed in Claim 1, further comprising an optically effective material, comprising a filter plate or a thin foil having a microstructure of prismatic effect, arranged between the first and second light sources, so that light of the first light source having angles of incidence greater than a critical angle of the second light source is essentially prevented from entering the second light source.

19. (Previously Presented) An arrangement as claimed in Claim 1, in which the second light source comprises a great number of separately controllable, individual light sources that radiate light towards the image display device and that, simultaneously, are configured as opaque filter elements in the wavelength filter array.

20. (Previously Presented) An arrangement as claimed in Claim 19, in which the light sources are light-emitting, essentially planar polymer layers.

21-23. (Cancelled).

24. (Previously Presented) An arrangement as claimed in Claim 2, in which the diffuse illuminator in the second mode of operation comprises a light outcoupling structure that can be switched on and off and is located on at least one of the large surfaces.

25. (Previously Presented) An arrangement as claimed in Claim 24, in which the light outcoupling structure that can be switched on and off comprises a switchable scattering layer.

26. (Original) An arrangement as claimed in Claim 25, in which the switchable scattering layer is switched to be transparent in the first mode of operation and scattering in the second mode of operation.

27. (Previously Presented) An arrangement as claimed in Claim 26, in which, in the second mode of operation, only partial surfaces of the switchable scattering layer are switched to be scattering.

28. (Previously Presented) An arrangement as claimed in Claim 27, in which the partial areas are stripe-shaped.

29. (Previously Presented) An arrangement as claimed in Claim 28, in which the stripe-shaped partial areas differ in width.

30. (Previously Presented) An arrangement as claimed in Claim 29, in which every two adjacent partial areas that are switched to be scattering are separated by permanently transparent stripe-shaped partial areas, so that the degree of light outcoupling from the light guide per unit area differs from place to place on the light guide.

31. (Previously Presented) An arrangement as claimed in Claim 24, in which the switchable scattering layer in the second mode of operation is switched to have differing degrees of scattering from place to place, so that the degree of light outcoupling from the light guide differs from place to place on the light guide.

32. (Previously Presented) An arrangement as claimed in Claim 31, in which pairs of different control signals are applied to different places on the switchable scattering layer to produce different degrees of scattering in the places.

33. (Previously Presented) An arrangement as claimed in Claim 24, in which the opaque filter elements on the side of the wavelength filter array that faces the observer are diffusely scattering.

34. (Previously Presented) An arrangement as claimed in Claim 24, in which the large faces of the light guide have plane and/or textured surfaces.

35. (Previously Presented) An arrangement as claimed in Claim 24, in which the switchable scattering layer is a liquid crystal layer that is transparent to light if a suitable voltage is applied and that scatters light if such voltage is missing.

36. (Previously Presented) An arrangement as claimed in Claim 2, in which the diffuse illuminator in the second mode of operation is a switchable scattering disk arranged between the light guide and the image display device, this scattering disc being switched to be transparent in the first mode of operation and, at least over part of its surface, scattering in the second mode of operation, so that the brightness contrast of the light passing the switchable scattering disk in the second mode of operation is reduced.

37. (Previously Presented) An arrangement as claimed in Claim 24, in which, in the second mode of operation, the first light source is switched on in addition to the second light source.

38-42. (Cancelled).

43. (Previously Presented) An arrangement as claimed in Claim 2, in which the diffuse illuminator in the second mode of operation comprises an optically scattering foil arranged between the wavelength filter array and the light guide.

44. (Previously Presented) An arrangement as claimed in Claim 43, in which switching into the first mode of operation is accomplished by removing the foil between the wavelength filter array and the light guide.

45. (Previously Presented) An arrangement as claimed in Claim 43, in which the foil has electrophoretic properties which cause it to be optically scattering in the second mode of operation and transparent to light in the first mode of operation, the switching between the second and first modes being accomplished by influencing the electrophoretic properties.

46. (Previously Presented) An arrangement as claimed in Claim 24, in which the wavelength filter array comprises an electrophoretic component provided with a control device, in which the opaque filter elements are switched to absorb light in the first mode of operation and to reflect light in the second mode of operation.

47. (Cancelled).

48. (Previously Presented) An arrangement as claimed in Claim 1, in which, in the first mode of operation providing at least partially three-dimensional display, either eye of the observer predominantly, but not exclusively sees a particular selection of the displayed bits of information from several perspective views of the scene or object, so that the observer has a spatial impression.

49-51. (Cancelled).

52. (Previously Presented) An arrangement as claimed in Claim 35, in which the liquid crystal layer has a cholesteric-nematic transition.